GATES LEARJET CORPORATION

maintenance manual

CHAPTER

7

LIFTING & SHORING

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LIFTING - MAINTENANCE PRACTICES

1. General
 A. Lifting (jacking) is accomplished by using conventional tripod jacks to raise the aircraft at three points. The nose or fuselage jackpoint is located just aft of the nose wheel well. The wing jackpoints are located on the wing, just aft of the main landing gear. Holes are provided in the aircraft structure at the jackpoints for installation of the jack pads. The jack pads and attaching parts are stored in the loose equipment kit in the baggage compartment.
 B. The entire aircraft may be lifted by wing and fuselage jack points to perform landing gear tests, removal and installation of nose and main landing gear, leveling and for other major repairs.
 C. The aircraft should be on a level surface and protected from wind gusts, preferably in a hangar.

2. Tools and Equipment

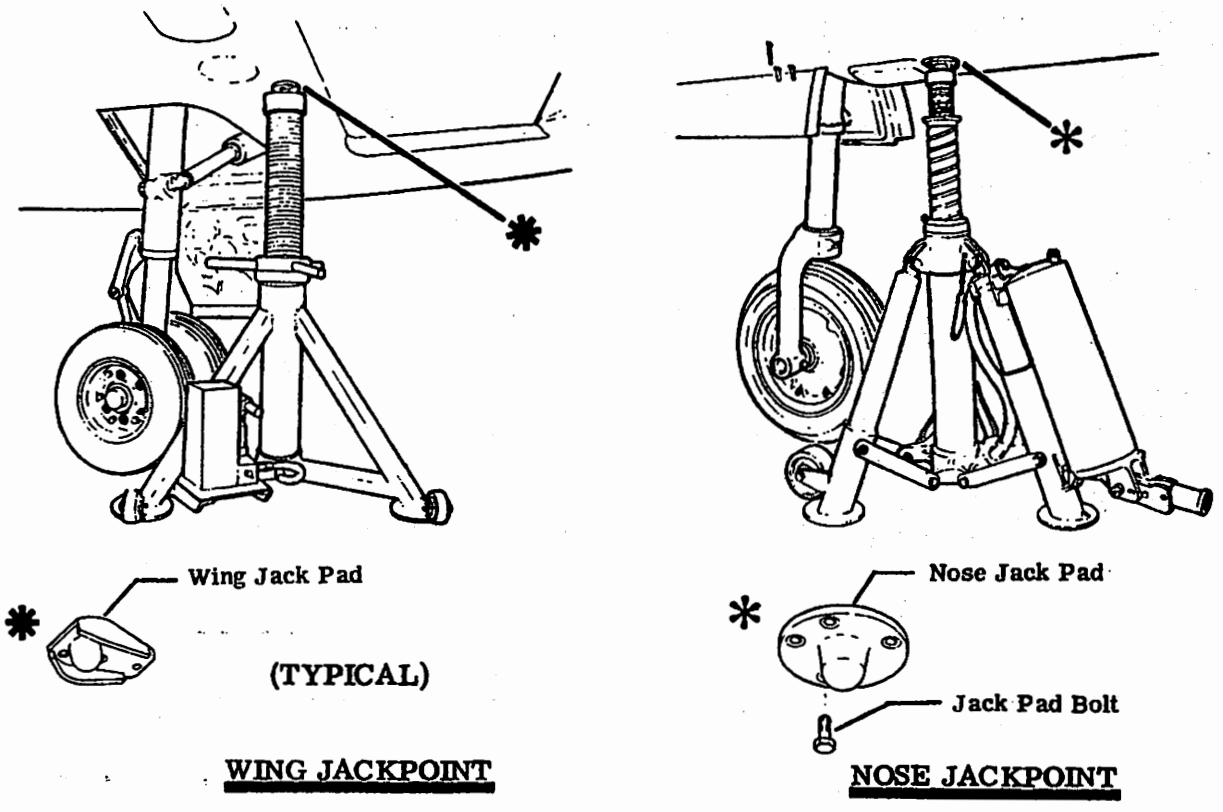
NAME	NUMBER	MANUFACTURER	USE
Jack Pad	2370102-4 (1 ea.)	Gates Learjet	General
Jack Pads	2572006-3 (2 ea.)	Gates Learjet	General
Tail Stand	2471016-1	Gates Learjet	General
Tripod Jacks		Commercially Available	General

3. Jacking
 A. Jacking the Aircraft (See figure 201)

 NOTE: Do not raise the aircraft more than required to perform maintenance.

 (1) Attach electrical grounds to aircraft.
 (2) Remove screws from jack pad locations and secure jack pads to structure.
 (3) Place jacks at jack pad locations.
 (4) Attach tail stand to ventral fin.
 (5) Simultaneously raise wings and fuselage jacks to prevent side loads on structure and jacks.

B. Removing Aircraft from Jacks (See figure 201)
 (1) Remove tail stand.
 (2) Simultaneously lower wing and fuselage jacks until aircraft rests on gear.
 (3) Remove jack pads from aircraft and stow in loose equipment kit.
 (4) Install previously removed screws where jack pads were installed.



Aircraft Jacking Provisions
Figure 201

EMERGENCY LIFTING - MAINTENANCE PRACTICES

1. General
 A. For emergency lifting, it may be necessary to use a sling or inflatable pneumatic bags for the initial lift to be followed up with conventional tripod jacks.

2. Tools and Equipment

NAME	NUMBER	MANUFACTURER	USE
Sling	2471008-1	Gates Learjet	Lift aircraft.
Pneumatic Bag		Firestone Tire & Rubber Co. Los Angeles, Calif.	Lift aircraft.
Pneumatic Bag		Goodyear Tire & Rubber Co. Los Angeles, Calif.	Lift aircraft.
Pneumatic Bag		General Tire & Rubber Co. Akron, Ohio	Lift aircraft.

3. Lifting Aircraft
 A. Sling Method (See figure 201)
 (1) Using a large phillips head screwdriver, remove two bolts from each wing.
 (2) Attach wing lugs to wing using bolts P/N AN6-10A and attach cables to wing lugs and spreader bar.
 (3) Slip belt under aircraft to the position shown and attach cables to belt and spreader bar assembly.
 (4) Adjust chain ends to align spreader bar parallel with the aircraft W. L.

 CAUTION: AVOID IMPACT LOADING DURING LIFTING.

 (5) As the aircraft is lifted, watch center of balance. The chain adjuster may have to be repositioned to keep the aircraft from tipping.
 (6) Stabilization ropes should be attached to each wing tip and either the nose or tailcone for guidance.
 (7) The cabin doors should be closed and the airplane transported as smoothly as possible to prevent further damage.

B. Pneumatic Bag Method (Aircraft Forward Fuselage) (See figure 202)

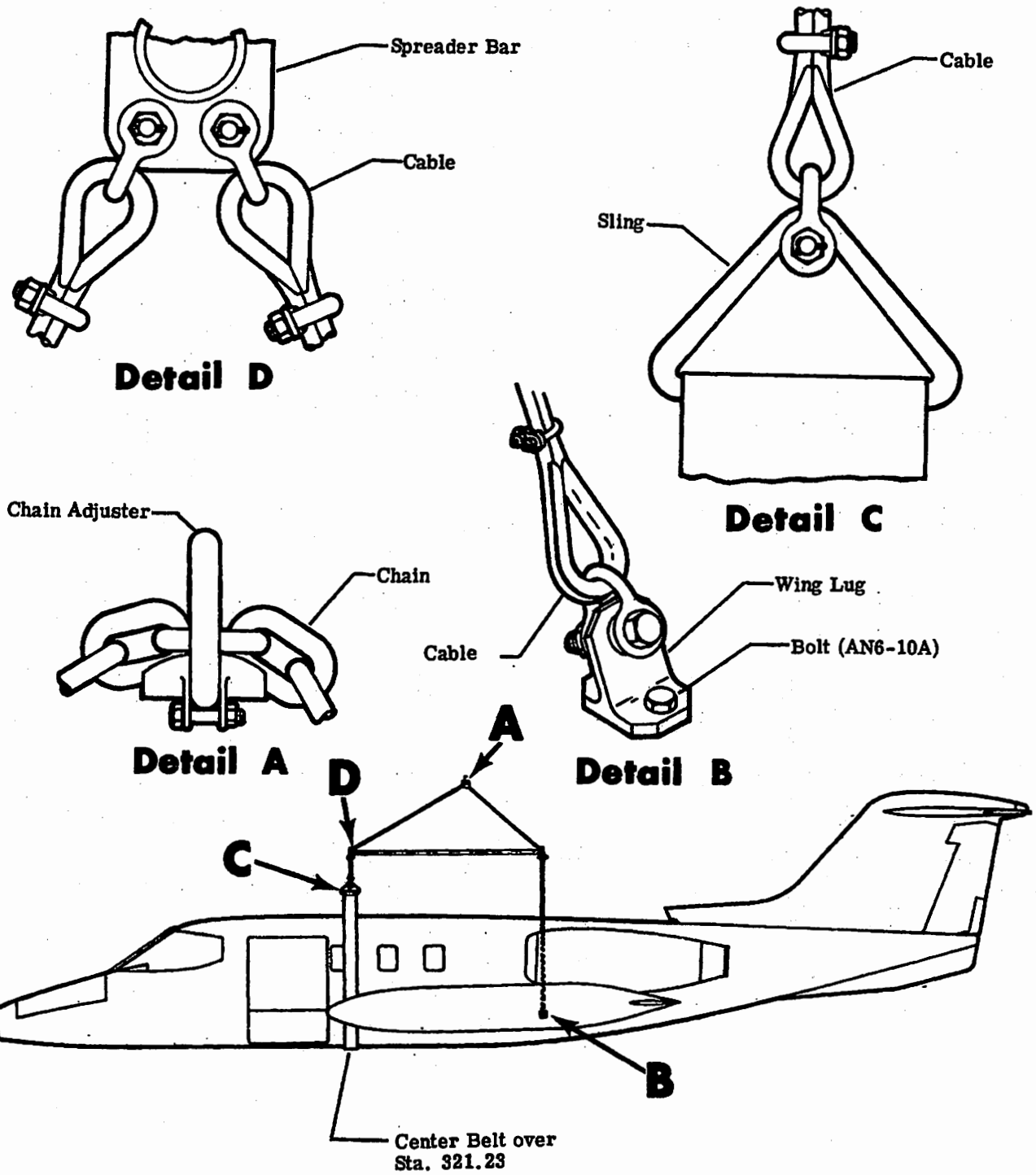
NOTE: The pneumatic bag method may be used when sling is not available.

(1) Place pneumatic bag beneath aircraft just aft of nose jack point.
(2) Slowly inflate bag until jack can be placed under fuselage.
(3) Raise jack until load is removed from bag and nose gear can be lowered.

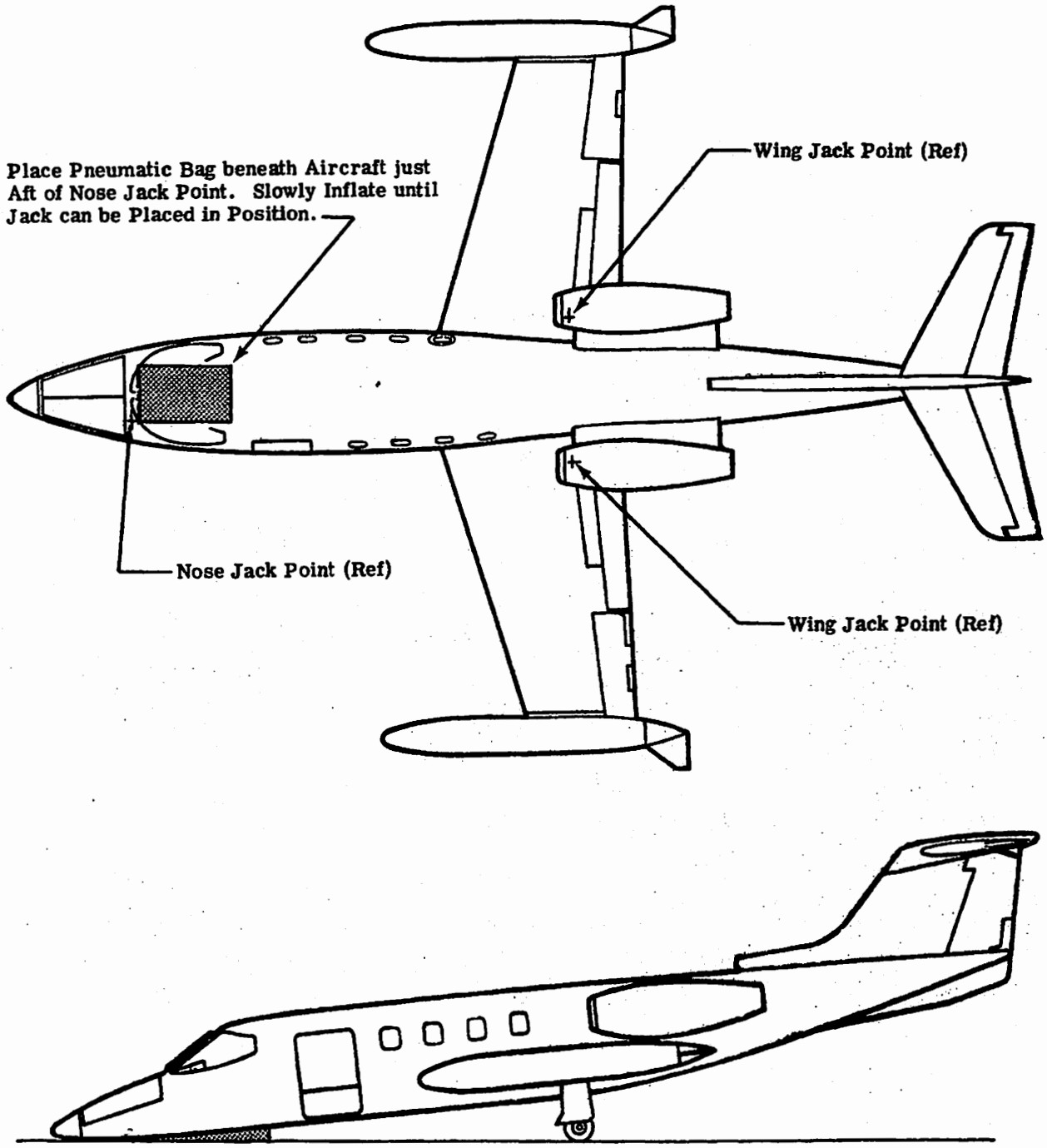
C. Pneumatic Bag Method (Aircraft Wing) (See figure 202)

NOTE: The following procedure may be used to raise either wing or both.

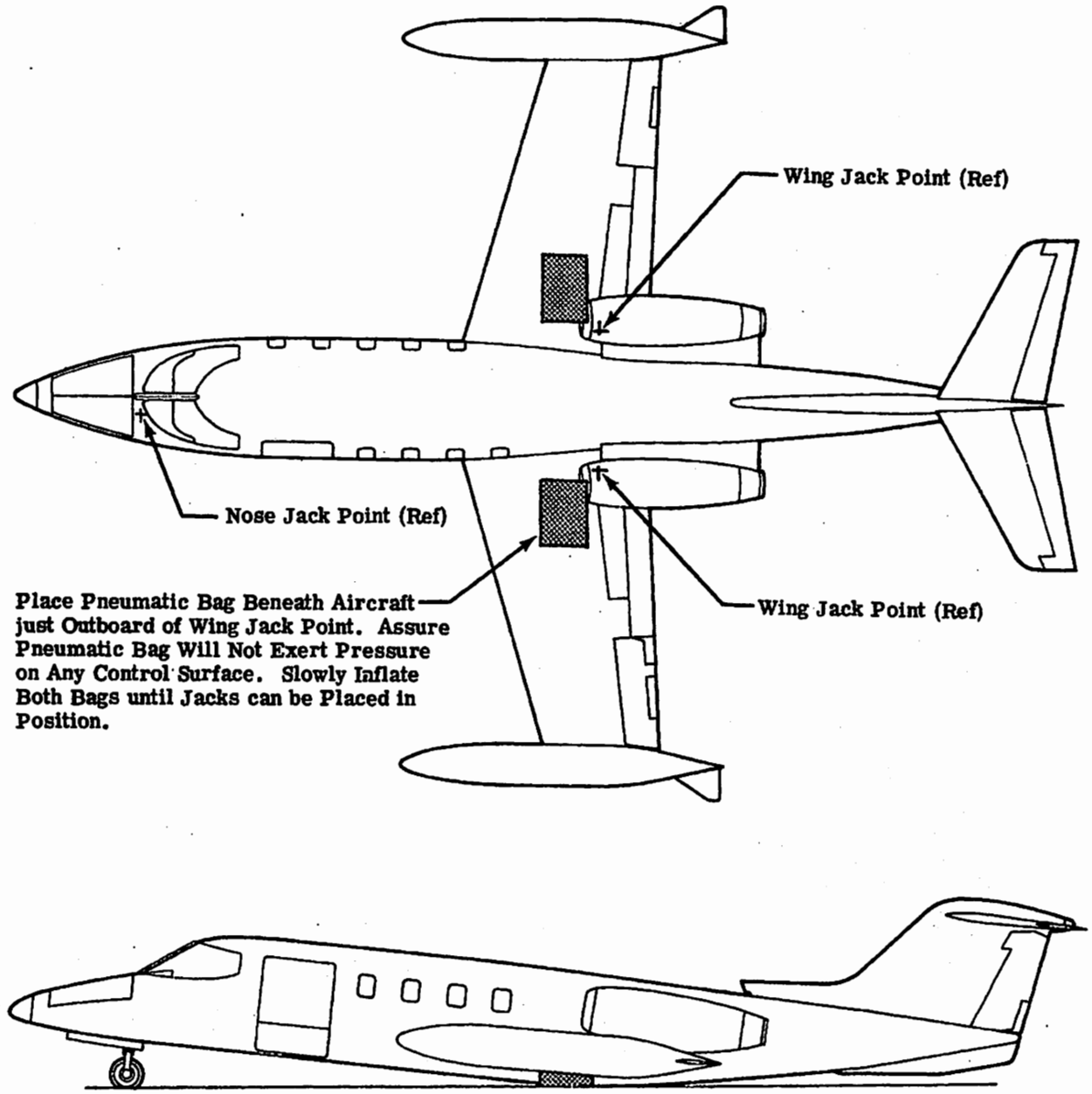
(1) Place pneumatic bag beneath wing just outboard of main gear and just forward of jackpoint.
(2) Slowly inflate bag until jack can be placed beneath the wing.
(3) Raise jack until load is removed from pneumatic bag and main gear can be lowered.



Lifting Aircraft by Sling Method
Figure 201



Lifting Aircraft by Pneumatic Bag
Figure 202 (Sheet 1 of 2)



Lifting Aircraft by Pneumatic Bag
Figure 202 (Sheet 2 of 2)

